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August 29, 1986

TO: File

FROM: James S. Leatherwood, Reclamation Soils Specialist 

RE: MRP Reveiw: Soils, Kearl-Sanders Co., Dolores #5 mine,
PRO/019/008, Grand County, Utah

Rule M - 10(14) SOILS - JSL

The submitted mine plan for the above mentioned placer operation has been reviewed. It is the operators contention to remove and stockpile a mixture of both topsoil and four to five feet of overburden (subsoil). A soil analysis was performed to determine if the topsoil should be segregated, removed and stockpiled separately from the overburden removal and storage operation. Due to the limiting conditions of each major soil horizon, mixing the soil materials would be no more less productive than the exisiting premining environmental conditions. Therefore, the Division finds the soil removal and redistribution plan to be technically adequate. However, the applicant must commit to berming and stabilizing the soil stockpiles, and notifying the Division if and when the BLM submits a fertilizer recomendation for the site.

Supporting Data

Four soil samples collected by Division personnel have been analyzed and rated for topsoil substitute suitability. The topsoil (A horizon) consist of a 5 YR 6/3 loamy sand with a pH of 8.5 and a electrical conductivity (EC) reading of 0.90 mmhos/cm. This material has an overall "fair" rating. Analysis has also shown that the subsoil material has a "fair" rating. Whereas the A (0-5") horizon, C1 (5-14") horizon and the C3 (27-48") horizon have specific parameter ratings in the "poor" category, the C2 (14-27") horizons' lowest rating is in the "fair" category. Due to the limiting conditions of each major horizon, mixing the soil materials would most probably be no more less productive than the existing premining environmental conditions.

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Horizon A1 (0-5") 5YR 6/3; Overall Rating: Fair

<u>Parameter</u>	<u>Data</u>	<u>Rating</u>
Texture	loamy sand	Fair
pH	8.5	Poor
EC	0.9	Good

Horizon C1 (5-14") 5 YR 5/3; Overall Rating: Fair

<u>Parameter</u>	<u>Data</u>	<u>Rating</u>
Texture	sandy loam	Good
pH	8.5	Poor
EC	9.5	Poor

Horizon C2 (14-27") 5 YR 5/3; Overall Rating: Fair

<u>Parameter</u>	<u>Data</u>	<u>Rating</u>
Texture	sandy loam	Good
pH	8.2	Fair
EC	5.8	Fair

Horizon C3 (27-48") 5 YR 4/4; Overall Rating: Fair

<u>Parameter</u>	<u>Data</u>	<u>Rating</u>
Texture	sand	Poor
pH	7.9	Fair
EC	2.7	Good

cc W. Hedberg
D. Wham
L. Kunzler
S. Linner

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